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*The Ta Ki, the Svastika and the Cross in America.**By Daniel G. Brinton, M.D.**(Read before the American Philosophical Society, December 21, 1888.)*

What I am about to say is, to a certain degree, polemical. My intention is to combat the opinions of those writers who, like Dr. Hamy, M. Beauvois and many others,* assert that, because certain well-known Oriental symbols, as the Ta Ki, the Triskeles, the Svastika and the Cross, are found among the American aborigines, they are evidence of Mongolian, Buddhistic, Christian or Aryan immigrations, previous to the discovery by Columbus; and I shall also try to show that the position is erroneous of those who, like William H. Holmes, of the Bureau of Ethnology, maintain that "it is impossible to give a satisfactory explanation of the religious significance of the cross as a religious symbol in America."[†]

In opposition to both these views I propose to show that the primary significance of all these widely extended symbols is quite clear; and that they can be shown to have arisen from certain fixed relations of man to his environment, the same everywhere, and hence suggesting the same graphic representations among tribes most divergent in location and race; and, therefore, that such symbols are of little value in tracing ethnic affinities or the currents of civilization.

Their wide prevalence in the Old World is familiar to all students. The three legs diverging from one centre, which is now the well-known arms of the Isle of Man, is the ancient *Triquetrum*, or, as Olshausen more properly terms it, the *Triskeles*,[‡] seen on the oldest Sicilian coins and on those of Lycia, in Asia Minor, struck more than five hundred years before the beginning of our era. Yet such is the persistence of symbolic forms, the traveler in the latter region still finds it recurring on the modern

* Dr. E. T. Hamy, *An Interpretation of one of the Copan Monuments*, in *Journal of the Anthropological Institute*, February, 1887; also, *Revue d'Ethnographie*, 1886, p. 233; same author, *Le Svastika et la Roue Solaire en Amérique*, *Revue d'Ethnographie*, 1885, p. 22. E. Beauvois, in *Annales de Philosophie Chrétienne*, 1877, and in various later publications. Ferraz de Macedo, *Essai Critique sur les Ages Préhistoriques de Brésil*, Lisbon, 1887, etc.

[†] See his article, "Art in Shell of the Ancient Americans," in *Second Annual Report of the Bureau of Ethnology*, p. 270.

[‡] See his article in *Zeitschrift für Ethnologie*, 1886, p. 223.

felt wraps used by the native inhabitants.* As a decorative motive, or perhaps with a deeper significance, it is repeatedly found on ancient Slavic and Teutonic vases, disinterred from mounds of the bronze age, or earlier, in Central and Northern Europe. Frequently the figure is simply that of three straight or curved lines springing from a central point and surrounded by a circle, as :



Fig. 1.



Fig. 2.

In the latter we have the precise form of the Chinese Ta Ki, a symbolic figure which plays a prominent part in the mystical writing, the divination and the decorative art of China.†

As it is this symbol which, according to Dr. Hamy, the distinguished ethnologist and Director of the Museum of the Trocadero, Paris, indicates the preaching of Buddhistic doctrines in America, it merits close attention.

The Ta Ki, expressed by the signs :



Fig. 3.

is properly translated, "The Great Uniter" (*ta*, great ; *ki*, to join together, to make one, to unite), as in modern Chinese philosophy, expressed in Platonic language, the One as distinguished from the Many, and is regarded as the basis of the numerical system. But as the Chinese believe in the mystic powers of numbers, and as that which reduces all multiplicity to unity naturally controls or is at the summit of all things, therefore the Ta Ki expresses the completest and highest creative force.

* Von Luchan, in *Zeitschrift für Ethnologie*, 1886, s. 301.

† See Dumontier, *Le Svastika et la Roue Solaire en Chine*, in *Revue d' Ethnologie*, 1885, p. 333, sq.

As in Chinese philosophy, the Universe is made up of opposites, heaven and earth, light and darkness, day and night, land and water, concave and convex, male and female, etc., the highest terms for which are *Yin* and *Yang*; these are held to be brought into fructifying union by *Ta Ki*. Abstractly, the latter would be regarded as the synthesis of the two universal antitheses which make up all phenomena.*

The symbolic representation of *Yin* and *Yang* is a circle divided by two arcs with opposite centres, while the symbol of *Ta Ki* adds a third arc from above uniting these two.



Fig. 4.



Fig. 5.

It is possible that these symbols are of late origin, devised to express the ideas above named. One Chinese scholar (Mr. S. Culin) tells me that it is doubtful if they occur earlier than the twelfth century, A. D., and that they were probably introduced for purposes of divination. In this case, I believe that they were introduced from the South, and that they originally had another and concrete significance, as I shall explain later.

Others consider these symbols as essentially Mongolian. The *Ta Ki* or *Triskeles* is to them the Mongolian, while the *Svastika* is the ethnic Aryan symbol. Such writers suspect Indo-European immigration where they discover the latter, Chinese immigration where they find the former emblem.

The *Svastika*, I need hardly say, is the hooked cross or gam mated cross, usually represented as follows:



Fig. 6.

the four arms of equal length, the hook usually pointing from left to right. In this form it occurs in India and on very early (neo-

* I am indebted for some of these explanations to Mr. K. Sungimoto, an intelligent Japanese gentleman, well acquainted with Chinese, now resident in Philadelphia.

lithic) Greco-Italic and Iberian remains. So much has been written upon the Svastika, however, that I need not enter upon its archæological distribution.

Its primary significance has been variously explained. Some have regarded it as a graphic representation of the lightning, others as of the two fire-sticks used in obtaining fire by friction, and so on.

Whatever its significance, we are safe in considering it a form of the Cross, and in its special form obtaining its symbolic or sacred association from this origin.

The widely-spread mystic purport of the Cross symbol has long been matter of comment. Undoubtedly in many parts of America the natives regarded it with reverence anterior to the arrival of Europeans; as in the Old World, it was long a sacred symbol before it became the distinctive emblem of Christianity.

As in previous writings I have brought together the evidence of the veneration in which it was held in America, I shall not repeat the references here.

I believe we may go a step further and regard all three of these symbols, the Ta Ki or Triskeles, the Svastika and the Cross as originally the same in signification, or, at least, closely allied in meaning. I believe, further, that this can be shown from the relics of ancient American art so clearly that no one, free from prejudice, and whose mind is open to conviction, will deny its correctness.

My belief is that all of these symbols are graphic representations of the movements of the sun with reference to the figure of the earth, as understood by primitive man everywhere, and hence that these symbols are found in various parts of the globe without necessarily implying any historic connections of the peoples using them.

This explanation of them is not entirely new. It has previously been partly suggested by Profs. Worsaae and Virchow; but the demonstration I shall offer has not heretofore been submitted to the scientific world, and its material is novel.

Beginning with the Ta Ki, we find its primary elements in the symbolic picture-writing of the North American Indians. In

that of the Ojibways, for example, we have the following three characters :



Fig. 7.



Fig. 8.



Fig. 9.

Of these, the Fig. 7 represents the sunrise ; Fig. 9, sunset ; Fig. 8, noonday. The last-mentioned is the full day at its height.* Where, in rock-writing or scratching on wood, the curve could not conveniently be used, straight lines would be adopted :



Fig. 10.

thus giving the ordinary form of the Triskeles. But the identical form of the Ta Ki is found in the calendar scroll attached to the Codex-Poinsett, an unpublished original Mexican MS., on agave paper, in the library of the American Philosophical Society. A line from this scroll is as follows :



Fig. 11.

Here each circle means a day, and those with the Triskeles, culminating days.†

* George Copway, *Traditional History of the Ojibway Nation*, p. 134. It will be noted that in the sign for sunrise the straight line meets the curve at its *left* extremity, and for sunset at its *right*. This results from the superstitious preference of facing the south rather than the north.

† The triplicate constitution of things is a prominent feature of the ancient Mexican philosophy, especially that of Tezcucó. The visible world was divided into three parts, the earth below, the heavens above, and man's abode between them. The whole was represented by a circle divided into three parts, the upper part painted blue, the lower brown, the centre white (see Duran, *Historia*, Lam. 15a, for an example). Each of these three parts was subdivided into three parts, so that when the Tezcucan king built a tower as a symbol of the universe, he called it "The Tower of Nine Stories" (see my *Ancient Nahuatl Poetry*, Introduction, p. 36).

Another form of representing days is seen in the Vatican Mexican Codex published in Kingsborough's *Mexico*, Vol. iii :



Fig. 12.

This is not far from the figure on the stone at Copan, described in Dr. Hamy's paper, where the design is as follows :

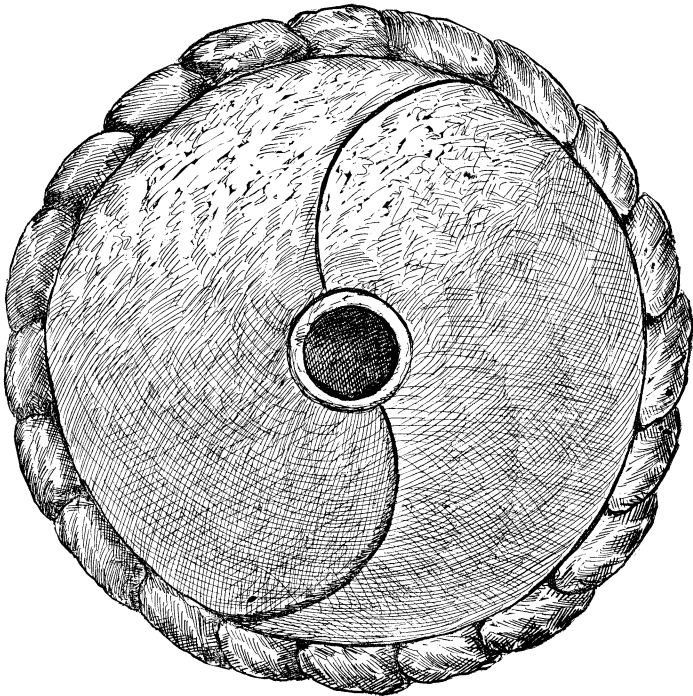


Fig. 13.

This does not resemble the Ta Ki, as Dr. Hamy supposes, but rather the Yin-Yang; yet differs from this in having a central circle (apparently a cup-shaped depression). This central circular figure, whether a boss or nave, or a cup-shaped pit, has been explained by Worsaae as a conventionalized form of the sun, and

in this he is borne out by primitive American art, as we shall see. The twenty elevations which surround the stone, corresponding in number to the twenty days of the Maya month, indicate at once that we have here to do with a monument relating to the calendar.

Turning now to the development of this class of figures in primitive American art, I give first the simplest representations of the sun such as those painted on buffalo skins by the Indians of the Plains, and scratched on the surface of rocks. The examples are selected from many of the kind published by Col. Garrick Mallery.*

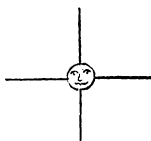


Fig. 14.

The design is merely a rude device of the human face, with four rays proceeding from it at right angles. These four rays represent, according to the unanimous interpretation of the Indians, the four directions defined by the apparent motions of the sun, the East and West, the North and South. By these directions all travel and all alignments of buildings, corpses, etc., were defined; and hence the earth was regarded as four-sided or four-cornered; or, when it was expressed as a circle, in accordance with the appearance of the visible horizon, the four radii were drawn as impinging on its four sides:

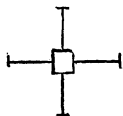


Fig. 15.



Fig. 16.

Fig. 15 is a design on a vase from Marajo, Brazil, and is of common occurrence on the pottery of that region.† Fig. 16 repre-

* Mallery, *Pictography of the North American Indians*, in *Fourth Annual Report of the Bureau of Ethnology*, p. 239.

† Dr. Ferraz de Macedo, *Essai Critique sur les Ages Prehistorique de Bresil*, p. 38 (Lisbonne, 1887).

sents the circle of the visible horizon, or the earth-plain, with the four winds rushing into it when summoned by a magician. It is a figure from the Meday magic of the Ojibways.* Dr. Ferraz de Macedo has claimed that such devices as Fig. 16 "show Chinese or Egyptian inspiration."† It is certainly unnecessary to accept this alternative when both the origin and significance of the symbol are so plain in native American art.

When the symbol of the sun and the four directions was inscribed within the circle of the visible horizon, we obtain the figure representing the motions of the sun with reference to the earth as in :



Fig. 17.

This is what German archæologists call the wheel-cross, *Radkreuz*, distinguished, as Worsaae pointed out, by the presence of the central boss, cup or nave, from the ring-cross, *Ringkreuz*, Fig 18 :



Fig. 18.



Fig. 19.

in which, also, the arms of the cross do not reach to the circumference of the wheel. Worsaae very justly laid much stress on the presence of the central boss or cup, and correctly explained it as indicative of the sun; but both he and Virchow, who follows him in this explanation, are, I think, in error in supposing that the circle or wheel represents the rolling sun, *die rollende Sonne*. My proof of this is that this same figure was a familiar symbol, with the signification stated, in tribes who did not know

* *Captivity and Adventures of John Tanner*, pp. 359, 360.

† *Op. cit.*, p. 38.

the mechanical device of the wheel, and could have had, therefore, no notion of such an analogy as the rolling wheel of the sun.*

When applied to time, the symbol of the circle in primitive art referred to the return of the seasons, not to an idea of motion in space. This is very plainly seen both in art and language. In the year-counts or winter-counts of the American tribes, the years were very generally signified by circles arranged in rows or spires. Fig. 20 shows the Dakota winter-count, as depicted on their buffalo robes.†

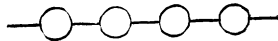


Fig. 20.

This count is to be read from right to left, because it is writ-

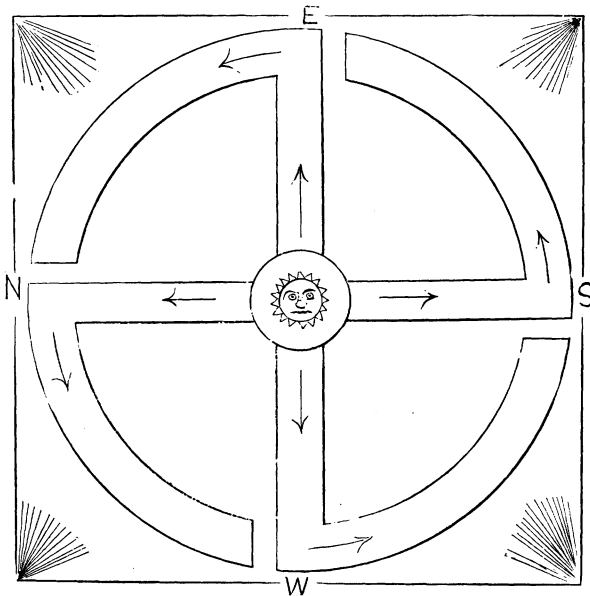


Fig. 21.

* See Worsaae, *Danish Arts*, and Virchow, in various numbers of the *Zeitschrift für Ethnologie*. The ring-cross is a common figure in American symbolism and decorative art. It frequently occurs on the shields depicted in the Bologna Codex, and the two codices of the Vatican (Kingsborough's *Antiquities of Mexico*, Vols. ii and iii). Dr. Ferraz de Macedo says that the most common decorative design on both ancient and modern native Brazilian pottery is the ring-cross in the form of a double spiral, as in Fig. 19 (*Essai Critique sur les Ages Préhistorique de Brésil*, p. 40). A very similar form will be found in the Bologna Codex, pl. xviii, in Kingsborough's *Mexico*, Vol. ii.

† See Mallery, *Pictography of the North American Indians*, pp. 88, 89, 128, etc.

ten from left to right, and hence the year last recorded is at the end of the line.

Precisely similar series of circles occur on the Aztec and Maya codices with the same signification. Moreover, the year-cycles of both these nations were represented by a circle on the border of which the years were inscribed. In Maya this was called *uazlazon katun*, the turning about again, or revolution of the katuns.*

The Aztec figure of the year-cycle is so instructive that I give a sketch of its principal elements (Fig. 21), as portrayed in the atlas to Duran's History of Mexico.†

In this remarkable figure we observe the development and primary signification of those world-wide symbols, the square, the cross, the wheel, the circle, and the svastika. The last-mentioned is seen in the elements of the broken circle, which are:

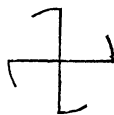


Fig. 22.

which conventionalized into rectilinear figures, for scratching on stone or wood, became:



Fig. 23.

In the Mexican time-wheel, the years are to be read from right to left, as in the Dakota winter-counts; each of the quarter circles represent thirteen years; and these, also, are to be read from right to left, beginning with the top of the figure, which is the East, and proceeding to the North, South and West, as indicated.

The full analysis of this suggestive and authentic astronomical figure will reveal the secret of most of the rich symbolism and mythology of the American nations. It is easy to see how from it was derived the Nahuatl doctrine of the *nahua olin*, or Four

* This name is given in Landa, *Relacion de las Cosas de Yucatan*, p. 313.

† *Historia de la Nueva Espana*, Trat. III, cap. i.

Motions of the Sun, with its accessories of the Four Ages of the World. The Tree of Life, so constantly recurring as a design in Maya and Mexican art, is but another outgrowth of the same symbolic expression for the same ideas.

That we find the same figurative symbolism in China, India, Lycia, Assyria and the valley of the Nile, and on ancient urns from Etruria, Iberia, Gallia, Sicilia and Scythia, needs not surprise us, and ought not to prompt us to assert any historic connection on this account between the early development of man in the New and Old World. The path of culture is narrow, especially in its early stages, and men everywhere have trod unconsciously in each other's footsteps in advancing from the darkness of barbarism to the light of civilization.

Grammatic Notes and Vocabulary of the Pennsylvania German Dialect.

By W. J. Hoffman, M.D., Washington, D.C.

(Read before the American Philosophical Society, December 21, 1888.)

It is an astonishing fact that the speech of over three-quarters of a million people, occupying the most fertile agricultural lands of Eastern Pennsylvania, has, with few unimportant exceptions, received almost no attention from a scientific and philological standpoint. It is not the intention of the writer to venture upon the subject from these points of view, but only to present a few brief facts respecting the grammatic and phonetic peculiarities of the "Pennsylvania German" dialect, and to give a vocabulary of such words as are at present employed by such of them as are not familiar with any other language.

It is the writer's intention to present here a simple and intelligible system of orthography, so that the exact sounds of syllables and words may readily be reproduced by any one not familiar with them. This has not been accomplished in the several brief contributions which have appeared at sundry times and in various places, excepting in the case of a few essays which were of strictly philologic value, but which, unfortunately, abound in inverted letters and diacritical marks, thus causing a practical study thereof to become rather difficult and tedious.

The alphabet employed in the present paper and vocabulary is practically that adopted by the Bureau of Ethnology, at Washington, D.C.